

ATTACHMENT 4: PROJECT DESCRIPTION

The Deer Creek and Tule River Authority (Authority) was formed in 1994 with the purpose to better collectively manage groundwater within the Tule Basin (Basin). Since then, the Authority has prepared Groundwater Management Plans and monitoring plans to better understand the existing basin conditions and to focus their efforts on projects in areas that have groundwater concerns, primarily due to groundwater overdraft. But, due to the lack of consistent and historical data, the Authority has been unable to adequately address areas of concern and there is a lack of agreement between members on the best projects or areas to address. Monitoring programs have been established only within the past few years and the data is too recent to identify consistent trends and it may take years before trends can be identified to substantiate a project.

The DCTRA members are proposing to prepare a Remote Sensing and Water Balance Model to have more accurate and real-time information regarding the water usage and demands within the Basin. Other conservation districts within the Tulare Lake Basin have implemented similar models to better manage their groundwater and have found the models to be extremely beneficial by providing quick and accurate data that can be passed to the Stakeholders.

Following is a brief summary of the physical basin conditions and a detailed description of the proposed Project.

Existing Basin Description:

The Tule Basin (Basin) has been defined by DWR Bulletin 118 as a groundwater basin that is critically overdrafted. The Tule Basin is bordered by Kern County to the South, Tulare Lake on the West, Kaweah Basin to the North and the foothills on the East. There are three major surface watersheds located within the boundary of the Tule Basin: Tule River, Deer Creek, and White River. The Tulare Lake Hydrologic Region is described in more detail in DWR Bulletin 118, Appendix B: Tulare Lake Hydrologic Region.

The DCTRA is located completely within the Tule Basin. The DCTRA Plan Boundary area (DCTRA Boundary) coverage includes the areas of the member districts and some additional land not within a particular member boundary. The DCTRA Boundary is located entirely within the County of Tulare and encompasses an area of approximately 289,000 acres bounded by:

East: Foothills of the Sierra Nevada Mountains

West: Kings/Tulare County Line

North: Northern boundary of Lower Tule Irrigation District and Porterville Irrigation District

South: Southern boundary of Pixley Irrigation District, Saucelito Irrigation District, and Terra Bella Irrigation District.

The City of Tulare is approximately 5 miles north of the Basin. Elevations range from approximately 250 feet above mean sea level in the western portion of the Basin to 500 feet above mean sea level in the eastern portion of the Basin. Two of the three major surface watersheds within the Tule Basin, the Tule River and Deer Creek, are within the DCTRA Boundary. Enclosed is a map which identifies the general location of the DCTRA Boundary within the Tule Basin along with the member agencies and stakeholders within the DCTRA Boundary.

DEER CREEK AND TULE RIVER AUTHORITY
REMOTE SENSING AND WATER BALANCE ANALYSIS MODEL

Detailed Project Description:

The Proposed DCTRA Groundwater Assessment Analysis and Report (Project) is described in detail as follows:

Location: The Project involves gathering existing historical data from within the entire boundary of the Authority. The Project includes reviewing historical data from each of the stakeholders and member participants within the DCTRA Boundary, along with data from different regulatory agencies.

Goals: The DCTRA Groundwater Management Plan identifies several Basin Management Objectives (BMO) and Goals. The highest priority BMO in the current Plan is Groundwater Basin Understanding, secondly Information Dissemination. Other BMO's within the GWMP, such as Groundwater Sustainability or Groundwater Resource Protection can be better implemented once the DCTRA Basin is better understood. The primary goal of the proposed Project is to develop a better understanding of the DCTRA Basin so that the Authority can make informed decisions on how to better manage water demands compared to available surface and groundwater to prevent overdrafting conditions. Creating an overall model to help facilitate this throughout the year is essential to allow the DCTRA Board and member districts to make real time decisions on groundwater management.

Usefulness/Quality of Data Collected: The Authority is proposing to create this Water Balance Model which can be utilized by the Authority for the overall basin. The purpose of the model is to be able to use real time aerial imagery data and determine basin demands in the future. This model will be extremely useful in determining basin water demands and cropping patterns in the Basin.

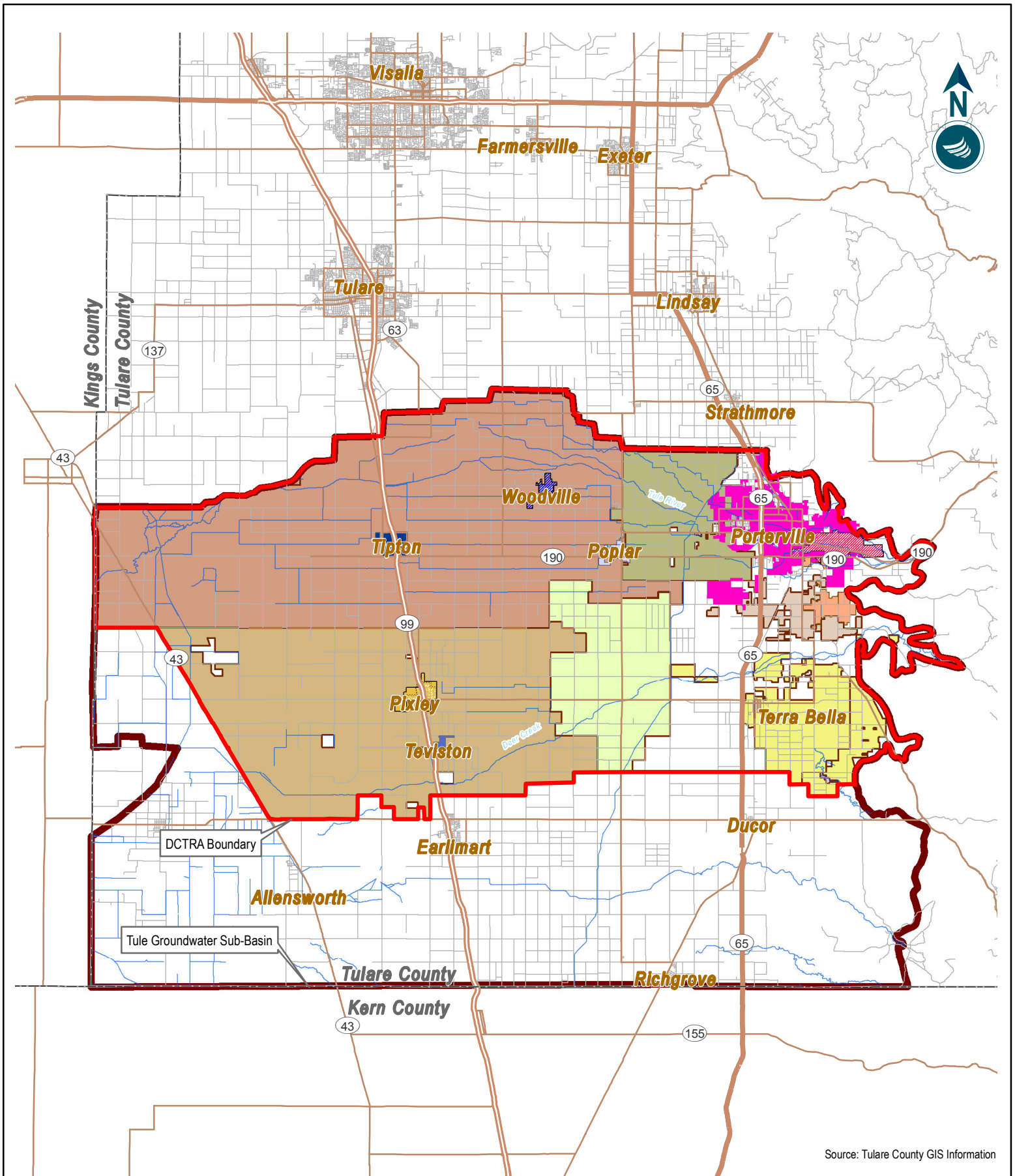
Collaboration with Stakeholders: The purpose of the Project is to better understand the DCTRA Basin by using real data to create a model which will calculate water demands on an Annual Basis. A final presentation will be given to the DCTRA Board, which is a public meeting, and notice will be provided to the Stakeholders for this presentation as well as the DCTRA Board members and participants.


Continued Project Implementation: After the Project has been completed, the model will be used in years to come to calculate Basin water demands and provide further insight into the water usage. The purpose is to establish the baseline model through this Project, with simple inputs in the future to identify basin demand.

ENCLOSURES:

- Deer Creek and Tule River Authority Vicinity Map

DEER CREEK AND TULE RIVER AUTHORITY
REMOTE SENSING AND WATER BALANCE ANALYSIS MODEL





2929 W. Main St., Ste. A
Visalia, California 93291
(559) 802-3052

Legend

- County Boundary
- DCTRA Boundary (289,448 Ac.)

City/Communities

- Porterville (9,064 Ac.)
- Pixley PUD (896 Ac.)
- Porter Vista PUD (1,743 Ac.)
- Woodville PUD (348 Ac.)
- Poplar CSD (410 Ac.)
- Teviston CSD (199 Ac.)
- Tipton CSD (692 Ac.)

Member Districts

- Lower Tule River ID (103,034 Ac.)
- Pixley ID (69,014 Ac.)
- Porterville ID (16,997 Ac.)
- Saucelito ID (19,702 Ac.)
- Tea Pot Dome WD (3,481 Ac.)
- Terra Bella ID (15,053 Ac.)
- Vandalia ID (1,379 Ac.)

Attachment A

DCTRA Member Districts

Deer Creek Tule River Authority
Groundwater Management Plan